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The FIRE CHIEF'S News Letter

Issued by

THE INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

24 West 40th Street, New York, 18, N. Y.

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PIER FIRE LESSONS

The fire which demolished the big Grace S. S. Line pier in New York City late in September again emphasized the tremendous fire risk of these structures. It also emphasized the lack of progress over the past score of years in providing protection for these hazards.

The introduction of metal pier sheds a few years back was a step in the right direction. The substitution of concrete for planks as pier flooring was also a forward step; but the latter has proven to be a barrier to effective fire fighting operations.

As was clearly illustrated by the Cunard and Grace Line pier fires, it is next to impossible to bring below-deck fires under control with fire equipment now available to municipal fire departments. The heavy concrete decking is difficult to cut, so that getting cellar pipes in position to check the progress of the fire burning below the decking is slow, tedious work, even if air compressors and pavement cutters are immediately procurable. The width and length of pier structures make the task of controlling a fire beneath the deck a task of major proportions.

Wood piling, which has been creosoted to resist rot and marine borers, and which is coated with an accumulation of grease and oil picked up from the surface of the water, still represents the prime weakness in so far as fire protection of piers is concerned. When this sub-structure becomes well involved by fire, heavy or complete damage of the pier may be expected.

The solution to this problem seems to be in providing some form of fire barriers, placed at intervals across the pier and beneath the decking. Because concrete is attacked by the salts found in sea water, it is not suitable for piers in coastline cities. Here the indicated material for fire-stops is wrought iron plates, which stand up well in sea water. In fact, some piers in cities outside of New York are employing barriers of wrought iron with good results.

It may be necessary to include some form of sprinkler system to keep the plates wetted down in order to prevent ignition of woodwork in contact with them.

For fresh water, concrete fire stops are satisfactory.

Another feature which might simplify control of pier fires would be cross-pier openings through decking, such openings to be covered with removable metal plates. This feature would have the disadvantages of requiring careful storing of merchandise to prevent blocking the openings and of providing a possible means of quick transmission of fire from below the decking to the merchandise piled above.

At any rate, major changes will have to be made in pier design if these costly fires are to be checked.

F. S.

NATIONAL BOARD OF FIRE UNDERWRITERS ISSUES BOOKLETS

The National Board of Fire Underwriters, 85 John Street, New York 7, New York, has just issued four publications of pocket size which should be of great interest to fire chiefs.

They are as follows: THE FIRE SAFE HOME, 20 pages, which describes in narrative style how hazards that are found in homes have actually started fires, and tells how these fires might have been avoided. This booklet also lists the most important things firemen point out when they make home inspections and tells householders how they may look for the same hazards.

STOP FIRES - SAVE JOBS, 16 pages, reviews and lists common industrial fire hazards and suggests fire protection equipment and methods to combat them. Private fire brigades are also discussed in this pamphlet as are also the things to do in case of fire.

60 WAYS TO PREVENT FIRES IN YOUR HOME, 12 page folder, illustrates and lists the points of fire hazards around the ordinary dwelling. Sixty common points of origin of fire are described and suggestions made for preventing such fires.

FIRE SAFETY ON THE FARM, 24 pages, goes into the subjects of fire inspections around farm buildings, causes of fires, essential points to remember when having new construction work done, home fire protection, community fire protection and first aid treatment for scalds and burns.

These four pocket size booklets are available free of charge from the National Board of Fire Underwriters at the address given above.

Fire departments wishing a supply of them for distribution to homes, factories or neighboring farms may contact the National Board for the necessary copies.

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COTTON FIRES

At all times the protection of cotton against fire is an important matter, but this was emphasized during the critical years, so that unusual precautions were necessary to prevent fire damage and destruction. An intelligent understanding of the physical properties of cotton fibre will be helpful to those interested in production, handling and storage of cotton.

All organic fibres are subject to fire communication, but the physical nature of cotton increases this quality. It will be remembered that for combustion three conditions must be fulfilled: fuel, an oxidizing agent, and kindling temperature of the material serving as fuel. For combustion in ordinary fibres the oxidizing agent is the oxygen of the air surrounding the individual fibres. When tightly compressed into bales these fibres expose to the air but an insignificant surface for oxidation, and fire propagation to the interior of bales is limited by the amount of oxygen available inside the bales.

When fire has communicated to the interior of bales of such fibres it can be fully extinguished by opening the bales, and using a spray of water to cool the material below the kindling temperature. Some of these conditions

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International Association of Fire Chiefs
24 West 40th Street New York 18, N. Y.

Manager Fred Shepperd

are duplicated with cotton, but with an additional property that increases area in contact with air, and permits spread of fire inside of a bale through the individual filaments, each of which is of tubular form with sufficient entrained air to allow slow but progressive combustion.

For many years this has been a constant hindrance while attempting to control fire inside cotton bales. Water applied to the surface of a bale merely cooled the wetted part, but failed to have any effect on the interior. Soaking a bale by immersion in water for many hours equally failed to extinguish the interior smouldering. After application of water to the cotton when released from the bale to extinguish the interior fire, this was often followed by rekindling because penetration of the individual fibres by the water had not been accomplished. The lack of adhesion between water and the cotton surfaces was the cause of this failure of water as an extinguishing medium in cotton fibres. It was natural to reason that if air in the filaments could be replaced by some liquid that would penetrate by capillary attraction and exclude the air, the interior fire would be extinguished.

After the surface fire had been extinguished kerosene oil could be applied, as through capillary attraction it would penetrate the interior fibres to complete extinguishment. At first glance this might be considered to introduce an additional fire hazard, considering the flammability of oil. If applied to a burning surface in open air the oil would be vaporized, and with free oxygen available would ignite at the kindling temperature between 120 and 150 degrees Fahrenheit. But in reaching the interior fibres inside a bale of cotton the small quantity of heat of the smouldering fibres would be insufficient to raise the oil to the kindling temperature, so that the fire would be extinguished. Salvage of the remaining cotton after such procedure would include washing to remove the oil through application of an alkali, possibly a matter of considerable expense and delay.

This is merely a record of the procedure, but not an endorsement of the use of oil for extinguishing fires.

Modern science usually can find methods for handling any problem capable of solution, and in the case of fires in fibrous materials has given to fire protection engineers and fire fighters a simple and inexpensive solution. It has been known for years that but slight or no adhesion exists between water and certain materials, cotton fibre included. In the dyeing industry a similar condition has been recognized, as direct application of colors in solution has not been possible, but by use of an intermediate agent, known as a mordant, that will wet the fabric, the color solution will then become effective.

By utilizing the same principle it is now possible to add to water certain chemicals known as wetting agents, that make possible the necessary adhesion between the liquid and the materials to which it is to be applied for extinguishing purposes. The use of the wetting agent is in the proportion of one gallon of the solution to one hundred gallons of extinguishing water. Through the use of wetting agents fire departments are able to operate more effectively with less water than formerly and at the same time decrease the damage by excessive quantities of water otherwise required. Concealed fire in fibrous

materials may be effectively controlled through external application of wetting agents. At warehouses and at other locations where cotton and other fibrous materials are handled or stored, wetting agents should be available for use should fire occur. A type of ramrod nozzle for quickly applying the solution to the interior of bales or to parts not easily accessible should be useful for special service. The fog nozzle is particularly valuable for economical and effective use of water, especially for fire in fibrous materials, either loose or in bales.

In the industry, unusual efforts have been made to perfect the mechanical devices associated with the handling of cotton, including the detection and removal of metal and other objects that might cause friction sparks. The major hazard, however, is ignition from lighted cigarettes carelessly handled and discarded where cotton is handled, stored and transported. Even where smoking is forbidden and apparently controlled, the rules will occasionally be violated secretly by an addict to the cigarette habit, with possibility that the lighted cigarette may be quickly discarded before it is extinguished, if escape from detection is an objective. That is probably the most difficult condition to handle by the supervisory force, if in fact they also do not indulge in this infraction of the rules.

In plants where explosives and highly combustible materials are handled it is customary to compel removal of matches and smoking materials from each person entering the premises, as a means for preventing possible temptation of the owner of such articles. At cotton plants where the material is susceptible to ignition, preventive measures of this nature are seldom observed. If this national habit has reached the stage where smoking cannot be controlled in critical locations, then some arrangements could be made to legalize smoking at some safe location in the plant. A few minutes permitted for indulgence may prove an investment compared with loss of the entire plant by fire originated by careless smoking.

At some future date it may be legally possible to consider communication of fire from lighted smoking materials as a form of arson, with suitable penalty for offenders. For the present, reasonable control must be attempted.

Reprinted from News Letter, Association of American Railroads, Fire Protection and Insurance Section, September, 1947.

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CHIEF STEINKELLNER DEAD

Former Chief Peter Steinkellner, of the Milwaukee, Wisc., Fire Department, died at his home at Fox Lake, Wisc., on November 9 from a cerebral hemorrhage.

Chief Steinkellner joined the department on October 1, 1912; was made Lieutenant on April 1, 1920; advanced to Captain on November 1, 1925, and shortly thereafter passed the examination for Assistant Chief. He was appointed as Chief from the list on January 9, 1925. He retired in 1945.

Chief Steinkellner was an outstanding leader in the Fire Service. He was President of the Wisconsin State Association of Fire Chiefs and President of the Great Lakes Association of Fire Chiefs for many years; he also served as Director for the International Association of Fire Chiefs for over a decade.

He was selected by that body to serve as its representative on the fire defense committee of the Office of Civilian Defense in Washington during World War II, and his counsel and advice in that connection were of great benefit to the nation's fire service and its wartime defense plans.

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EX-CHIEF T. D. BLAKE DEAD

Former Chief Thomas D. Blake, 65, of Rockford, Illinois, a fireman for 44 years, died in his sleep Sunday morning, October 19, in a room in a Mount Vernon, Illinois, hotel where he was attending the state convention of the Illinois Firemen's Association.

Active in national, regional and state fire fighting organizations, Chief Blake had been Chief for 24 years before his retirement in November, 1946.

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TRENDS IN THE FIRE SERVICE

The past year has served to stress certain trends which hold tremendous possibilities for the Fire Service in the future. One of these is based on the growing realization that fire schools in the past have not accomplished fully the results expected from them, and it is the incorporation in fire schools of instruction in extinguishing actual fires.

This trend offers great promise from the standpoint of more scientific fire fighting in the future, with accompanying reduction of fire and water damage.

That the idea is taking hold is evidenced by the increasing number of fire school structures being erected in which fire extinguishing operations can be carried on. When it is recalled that under the three-platoon system the average fireman may have but a few hours of fire fighting duty per month, the value of these fire fighting schools can be better appreciated.

Another trend, or development, which bears watching is the use of wetting agents in water. Water so treated shows greater and more rapid penetration into substances than does plain water. This is an important factor in fire extinguishment, and the use of wetting agents may prove to be of great moment in bringing about a major reduction in fire loss.

Wetting agents have already proved conclusively their value in the control of brush and forest fire fighting where, by their use, the smouldering fire in the duff can be penetrated promptly and all traces of fire extinguished.

In view of reduction of personnel in fire departments, it is very much in order that serious thought be given methods of increasing fire fighting efficiency to make up for such loss of manpower. Further innovations, new methods and new equipment may be expected to appear in the field if the present trend continues.

F. S.

PREVENTING AMMONIUM NITRATE FIRES

Passage of municipal ordinances to control smoking on wharves, docks and aboard ships in port, was recommended by the Committee on Ammonium Nitrate in an interim report on December 10 to Major General Philip B. Fleming, Federal Works Administrator and General Chairman of the President's Conference on Fire Prevention.

Following disclosure that the Texas City, Texas, and Brest, France, disasters this spring were caused by the detonation of ammonium nitrate, the special committee was named to make a thorough study of methods to reduce the hazard of ammonium nitrate shipment aboard ship. The committee is continuing its studies, and the recommendation for the model no-smoking ordinance is a part of its preliminary findings.

The committee recommended that a port warden be appointed in each port with the power to arrest violators of no smoking rules. The ordinance would prohibit smoking or the possession of lighted cigars or cigarettes on waterfront facilities and aboard ships in harbor, except in certain sections of the vessel approved by the port warden. It was recommended that violations be treated as misdemeanors with appropriate fines.

The committee further recommended that "No Smoking" signs be posted on docks and that no dead storage of ammonium nitrate be permitted on waterfront facilities.

The committee includes Billings Wilson, American Association of Port Authorities, Chairman; Dr. Mathew H. Braidech, National Board of Fire Underwriters; Commodore H. C. Shepheard, U.S. Coast Guard; Dr. R. O. E. Davis, U.S. Department of Agriculture, and Warren N. Watson, Manufacturing Chemists Association.

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INTER-CHAMBER FIRE CONTEST

The National Fire Waste Council of the Chamber of Commerce of the United States, Washington, D. C., has sent out record forms to 2200 chambers of commerce throughout the country in connection with the Annual Fire Waste Contest.

More and more, chiefs of fire departments are taking part in this work, and the new form being issued has a portion which is to be filled out by the fire chief. The National Fire Waste Council, under the direction of its Secretary, Ed Hilton, has been a strong advocate of close cooperation between the chambers of commerce and the fire chiefs, and has consistently urged that the local chambers of commerce get behind the fire chiefs in programs for improvement of fire departments.

Fire chiefs wishing a copy of the questionnaire and record form may secure one by writing to Mr. H. E. Hilton, Secretary, National Fire Waste Council, 1615 H Street, N. W., Washington, D. C.

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POSITIONS OPEN

16 November, 1947
2541 East Monroe Street
Phoenix, Arizona

Chief Frank C. McAuliffe, President
International Association of Fire Chiefs
100 South Desplaines Street
Chicago 6, Illinois

My dear Chief McAuliffe:

Recently ran across this piece of information and thought that now with your added work, and position, you will be plagued for jobs or help of some nature.

In the new government project on the atomic situation at Los Alamos, New Mexico, they have their own fire department with Chief Harold F. Moore in charge. From indications he is having a little difficulty in getting help as this place is in a rather remote part of the world. It is located forty-four miles from Santa Fe, and some one hundred and fifty from Albuquerque. Salary for a private is $3000 a year, with increases relative to position. He would like to have a department of about ninety men.

Chief Moore is from New York with most of the top bracket personnel from that city. His mailing address is: Chief Harold F. Moore, Project Fire Department, Los Alamos, New Mexico.

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24 West 40th Street New York 18, N. Y.

Manager Fred Shapperd

Sincerely hoping this may be of some help to you, and with kindest personal regards, know me to be

Very truly yours,

JOHN J. GAFFNEY

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FIRE PREVENTION INSPECTOR SOUGHT

The City of Burbank, California, is looking for a Senior Fire Prevention Inspector to head up fire inspection activities in that growing city. Salary ranges from $375 to $417 per month (40-hour week).

The duties of the position, which is under the direct supervision of the Fire Chief, is to supervise the activities of the Fire Prevention Bureau and to direct and train the personnel assigned to the Bureau as well as to carry out other fire prevention activities.

Applications for the position must be filed with the Los Angeles County Civil Service Commission and may be addressed to the Personnel Department, City Hall, Burbank, California. Candidates must reside in the State of California at the time of filing application.

Qualifications for the position are set forth in the application form which may be secured at the above address.

QUESTIONS AND ANSWERS

802 Edinburgh Street
New Westminster, B. C.
October 10, 1947

International Association of Fire Chiefs
24 West 40th Street
New York 18, New York

Sirs:

Please send all the information you have regarding a chemical fertilizer (NITRO PRILLS).

Large cargoes are shipped constantly from this port.

Yours truly,

W. R. BROOKS

UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Administration
Bureau of Plant, Industry, Soils and
Agricultural Engineering
Beltsville, Maryland

November 26, 1947

Mr. Fred Shepperd, Engineer-Manager
International Association of Fire Chiefs
24 West 40th Street
New York 18, New York

Dear Mr. Shepperd:

Your letter of October 24, addressed to the Department of Agriculture, concerning nitro-prills, has been referred to this office. Nitro-prills is a trade name applied to an ammonium nitrate fertilizer manufactured in Canada by the Consolidated Mining and Smelting Company of Canada, Ltd.

The ammonium nitrate, while still in molten condition, is forced through fine openings as a spray and the droplets congeal to form small spheres which, after sieving, is fairly uniform in particle size. These particles are then coated with about 6% of inert siliceous material to prevent the prills from sticking together in storage or in shipment. The amount of ammonium nitrate present is about 93%, but there is no waxy coating such as used on the particles of ammonium nitrate manufactured in the United States.

The material is an excellent fertilizer material and is probably less hazardous than materials containing the waxy coating.

Very truly yours,

R. O. E. DAVIS
Assistant in Administration
Soils Division

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ART BAKER IN HOSPITAL

Chief Art J. Baker, Lewiston, Montana, and Past-president of the International Association of Fire Chiefs, entered the Colonial Hospital, Mayo Clinic, Rochester, Minnesota, on November 22 to undergo a serious operation. Word received on December 8 indicates that he is now progressing nicely and hopes to be out of the hospital by the first of the year. His room number is 542.

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CHIEF DOUGHERTY ON THE MEND

Former Acting Chief of the New York City Fire Department, Thomas F. Dougherty is only now fully recovering from an attack of double pneumonia which occurred early this year. He is taking matters easy at his home at 186-03 Midland Parkway, Jamaica, Long Island, New York, and hopes to be around within a month's time.

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VETERAN DANVILLE FIRE CHIEF RETIRING

The Danville, California, Fire Department is now headed by a new Chief after twenty-four years of service by the former Chief A. M. Fichtenmueller. The new chief is Duane Elliott, a member of the Department for eighteen years.

Chief Fichtenmueller, who will retain the title of Honorary Fire Chief, became head of the department two years after it was organized.

Coincident with his retiring, many friends learned for the first time that Chief Fichtenmueller, now 77, once fought as a professional boxer with 210 contests in the ring in his younger days.

Chief Fichtenmueller is a member of the International Association of Fire Chiefs, the Pacific Coast Inter-Mountain Association of Fire Chiefs, the Northern California Fire Chiefs' Association, and the California State Firemen's Association.

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MR. MALLALIEU RECOVERING

Mr. W. E. Mallalieu, General Manager of the National Board of Fire Underwriters, New York City, was rushed to the Jersey City Medical Center on November 17 for an emergency appendectomy.

It was announced by Mr. A. Bruce Bielaski, Assistant General Manager of the National Board that the operation was successful and that Mr. Mallalieu was confined to the hospital only for a few days.

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EX-CHIEF J. CAPELLI DIES

Chief Joseph Capelli, 80, former Chief of Fairfax, California, died at his San Rafael home on December 2.

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CHIEF HARRY E. CRISWELL DIES

Chief Harry Edwin (Happy) Criswell, died on November 14 at his home, Ottumwa, Iowa.

He had been a member of the Ottumwa Fire Department since September 16, 1919. He was promoted through the ranks and served as Chief of the department since 1944.

In the first world war he served with Co. G. 168th Infantry and went through all the Rainbow Division's major battles, being wounded in the battle of the Argonne.

He was a member of the American Legion and the Disabled American Veterans.

Funeral services were held at the Plymouth Congregational Church. Members of the Fire Department served as pallbearers.